

Microsoft Database Strategy

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Manager
Microsoft Corporation**

Agenda

- **Developer thinking and trends**
- **Microsoft database product family**
- **Strategic directions and enabling technologies**
- **Drill into specific development objectives**
- **Microsoft database product family strategy**

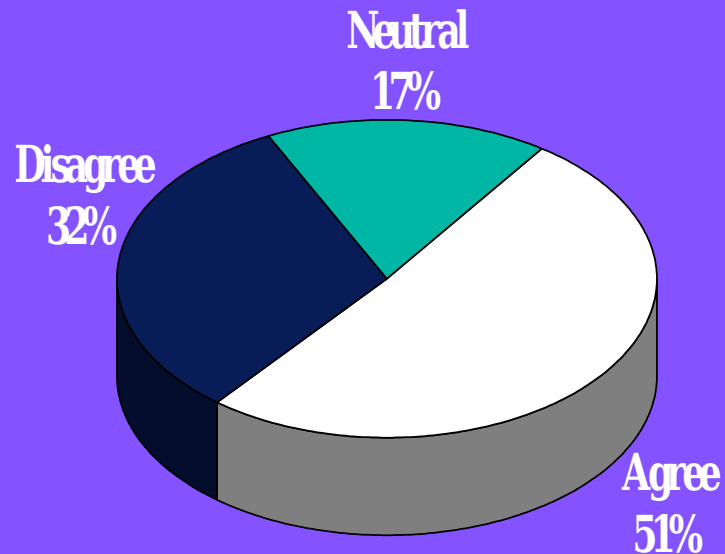
~~The Evolution of the Solution Developer~~

Microsoft's 1993 Developer Survey

Objectives - to find out:

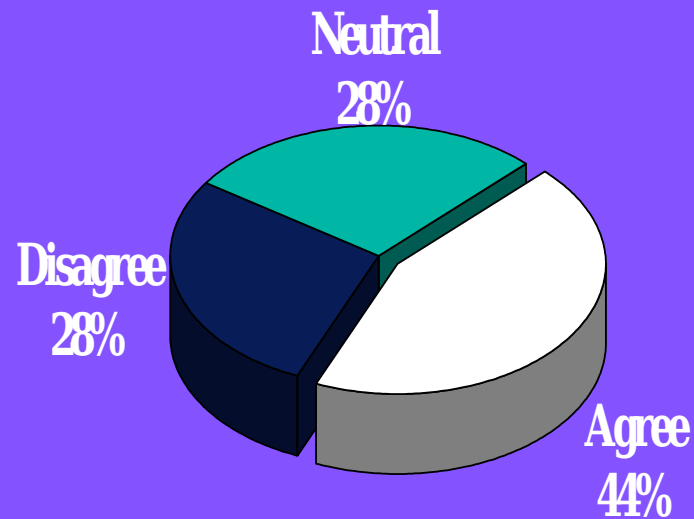
- Who is developing
- How are they developing
- What they are developing

“End users can effectively create applications that can be used by others”



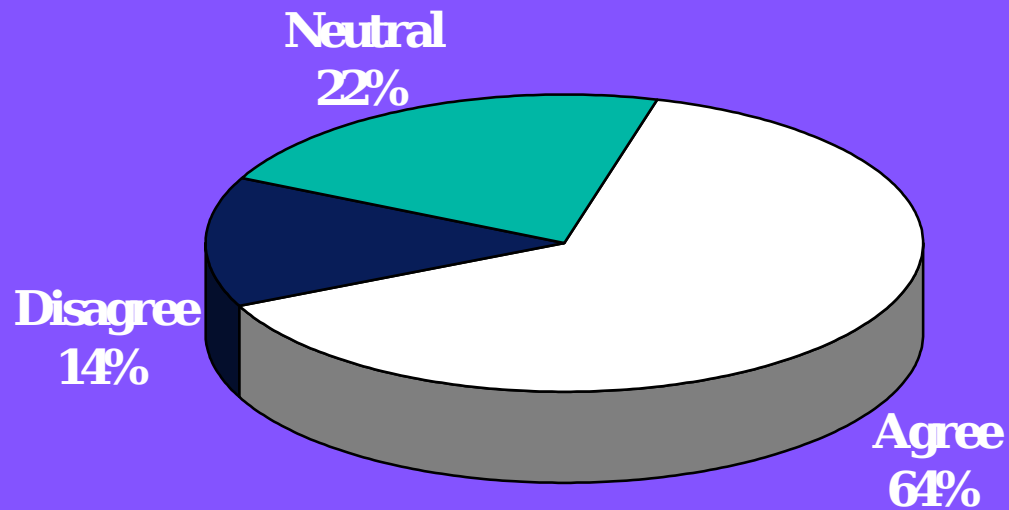
**Microsoft Developer
Survey, 1993**

**“High-level, high-productivity tools
can be as flexible and efficient as low-
level coding”**



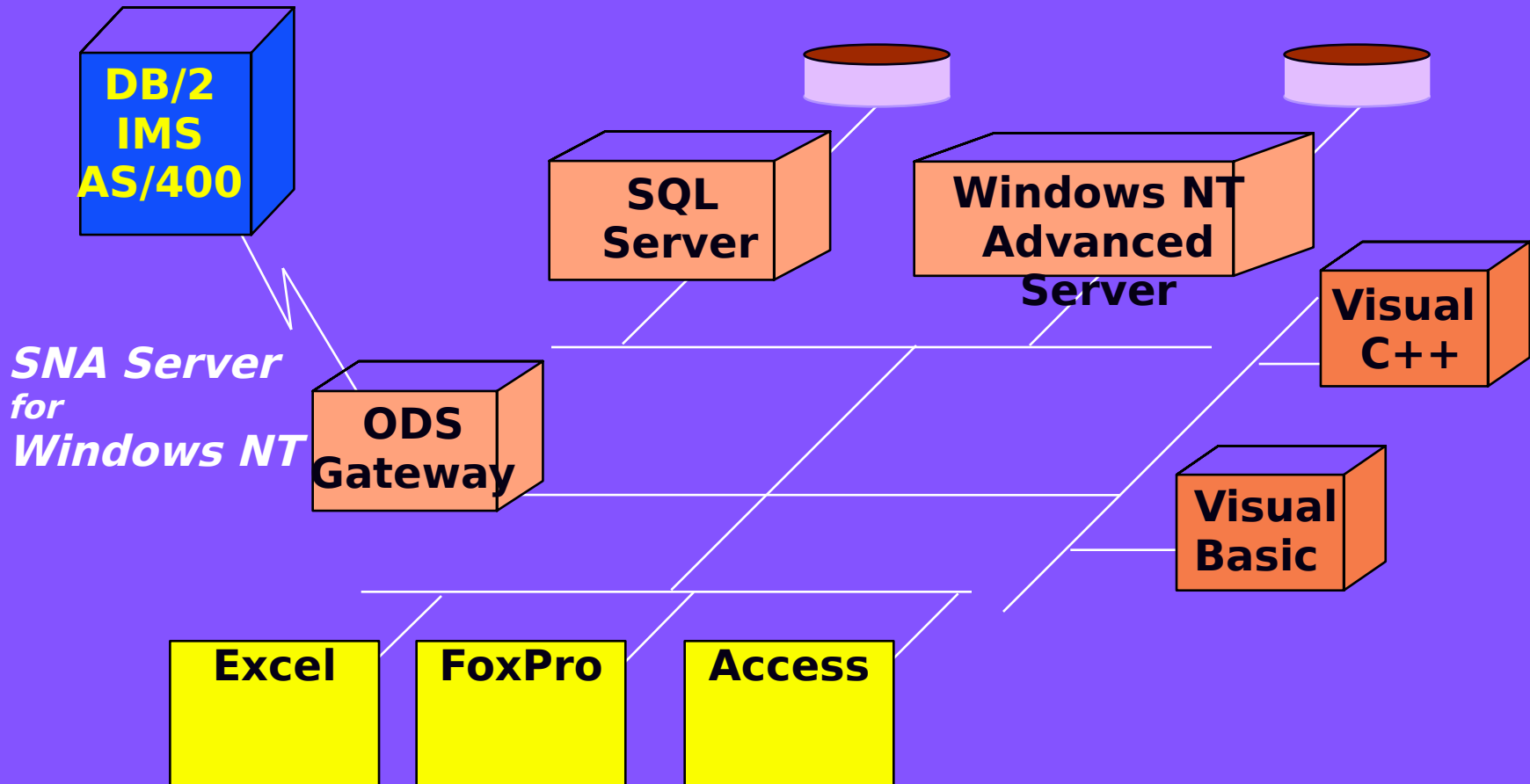
**Microsoft Developer
Survey, 1993**

“Client-server architecture can be a reliable replacement for mainframes and minis”



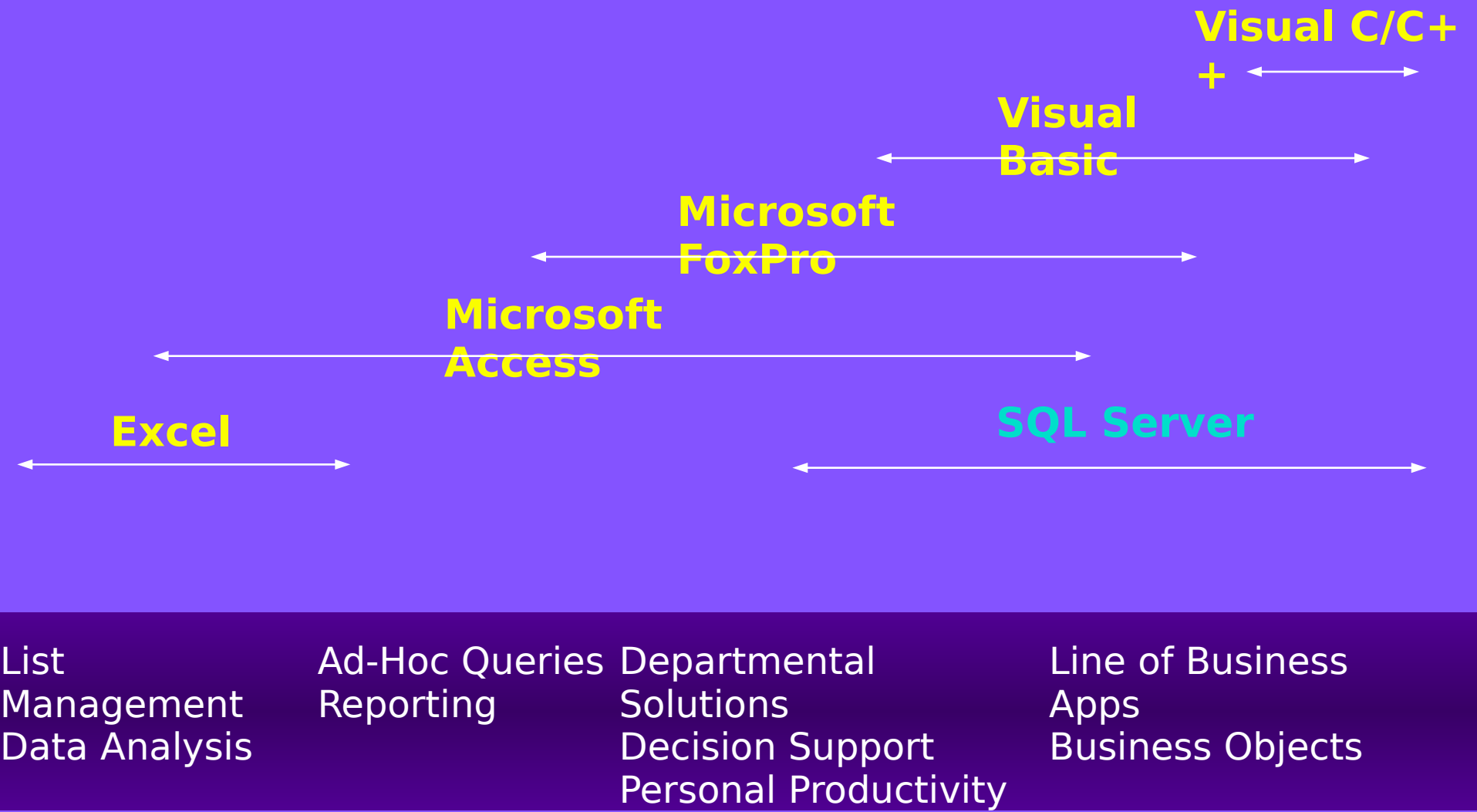
**Microsoft Developer
Survey, 1993**

Microsoft Database Product Family

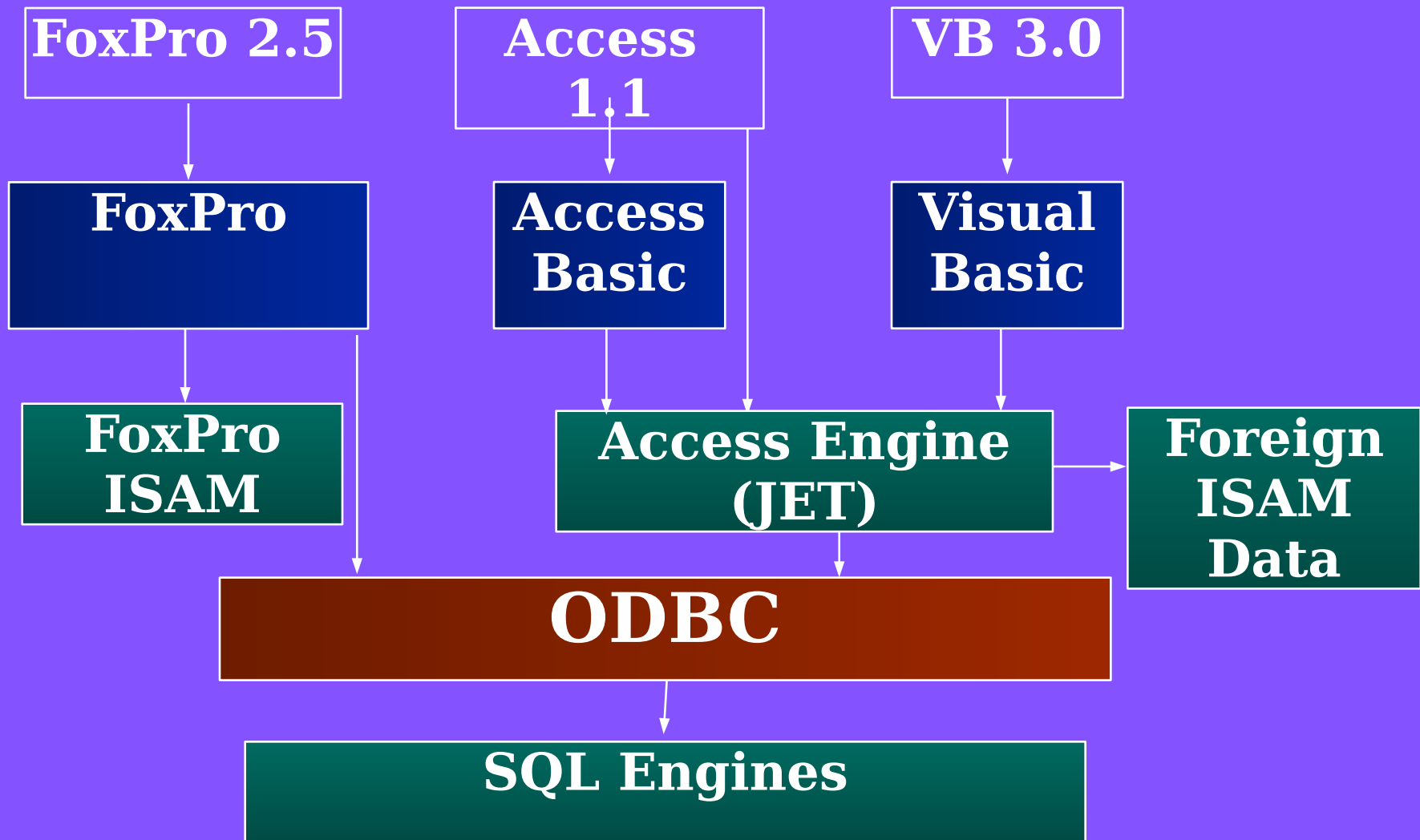


Database Development

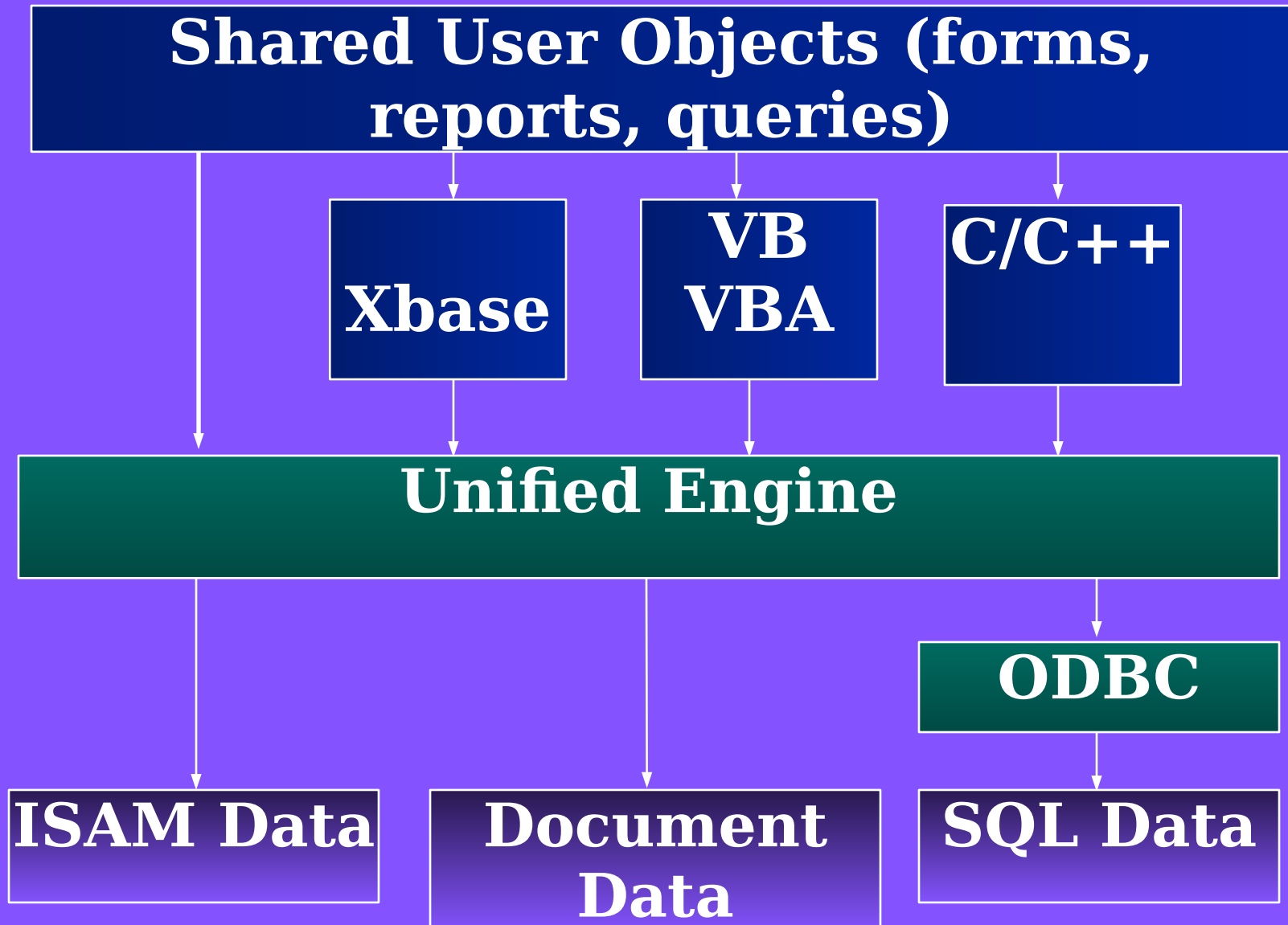
Power For Every Type of
Developer



Microsoft Databases: Today



Microsoft Databases: Long Term



Key Enabling Technologies

- **Data Access Engine**

- **WOSA**

 - **ODBC**

 - **MAPI**

 - **TAPI**

- **OLE**

- **Cairo**

Database Development Objectives

Four key components to a database development environment:

- **Great data access tools**
- **Complete development environment**
- **Scalable database**
- **Database management tools**

Great Data Access Tools

Design Goal: Make databases as easy to

use as spreadsheets

- **Wizards for users and developers**
- **Simplify database design**
- **Paradigm shift in how to view database data**
 - **Spreadsheet**
 - **Outline**
- **Automated data choreography**

Data Choreography

Design Goal: Automate the interaction between an application's data sources and its user interface.

- ❑ **Manager interface.**
- ❑ **Intelligent data retrieval**
- ❑ **Local data caching**
- ❑ **Binding data to UI**
- ❑ **Data retrieval and display**
- ❑ **Visual data navigation**
- ❑ **Integrity and validation**
- ❑ **Transaction update logic**

Complete Development Environment

Design Goal: Provide the tools and functionality

required by high end developers

- ▣ **Integration with CASE tools**
- ▣ **Integration with repository based data**
- ▣ **Integration with code control systems**
- ▣ **All tools become client/server tools**
- ▣ **Open interfaces through OLE automation**

Scalable Database

Design Goal: Provide low end ease of use and

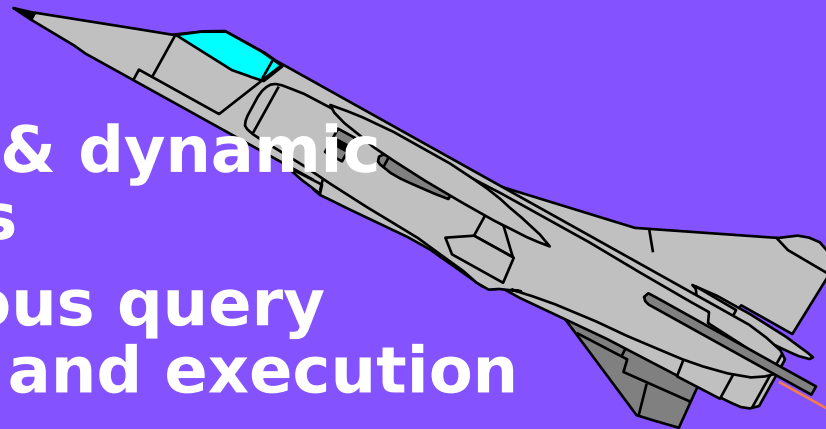
high end server

functionality, applications do not need software redesign

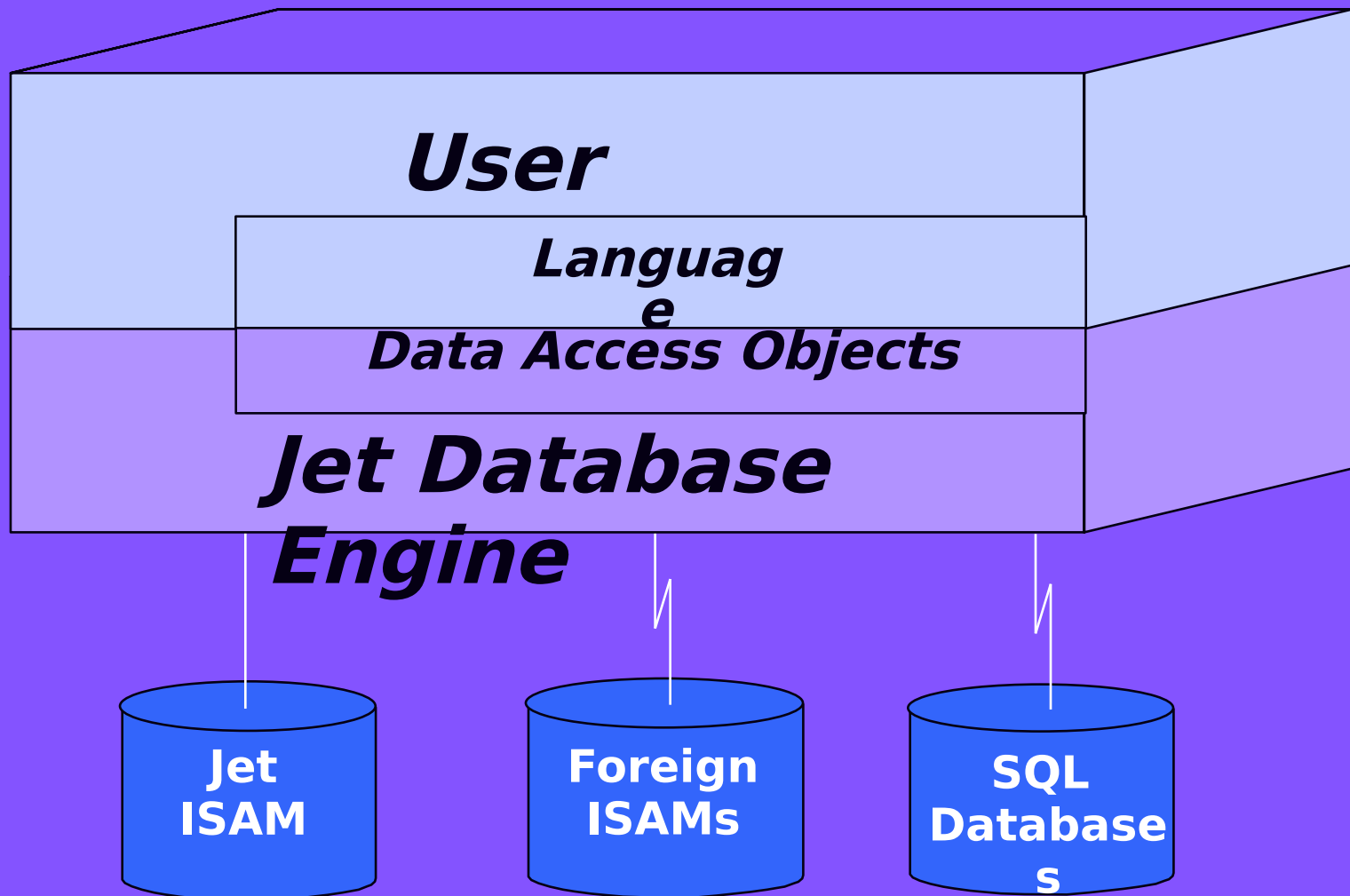
- **Integrate tightly with NT/Cairo for name services, security**
- **Expose OLE object extensions for programmability, administration**
- **Server management tools**
 - **Hermes**
 - **Simplify distributed processing administration burden**

Product Drilldown Jet Database Engine

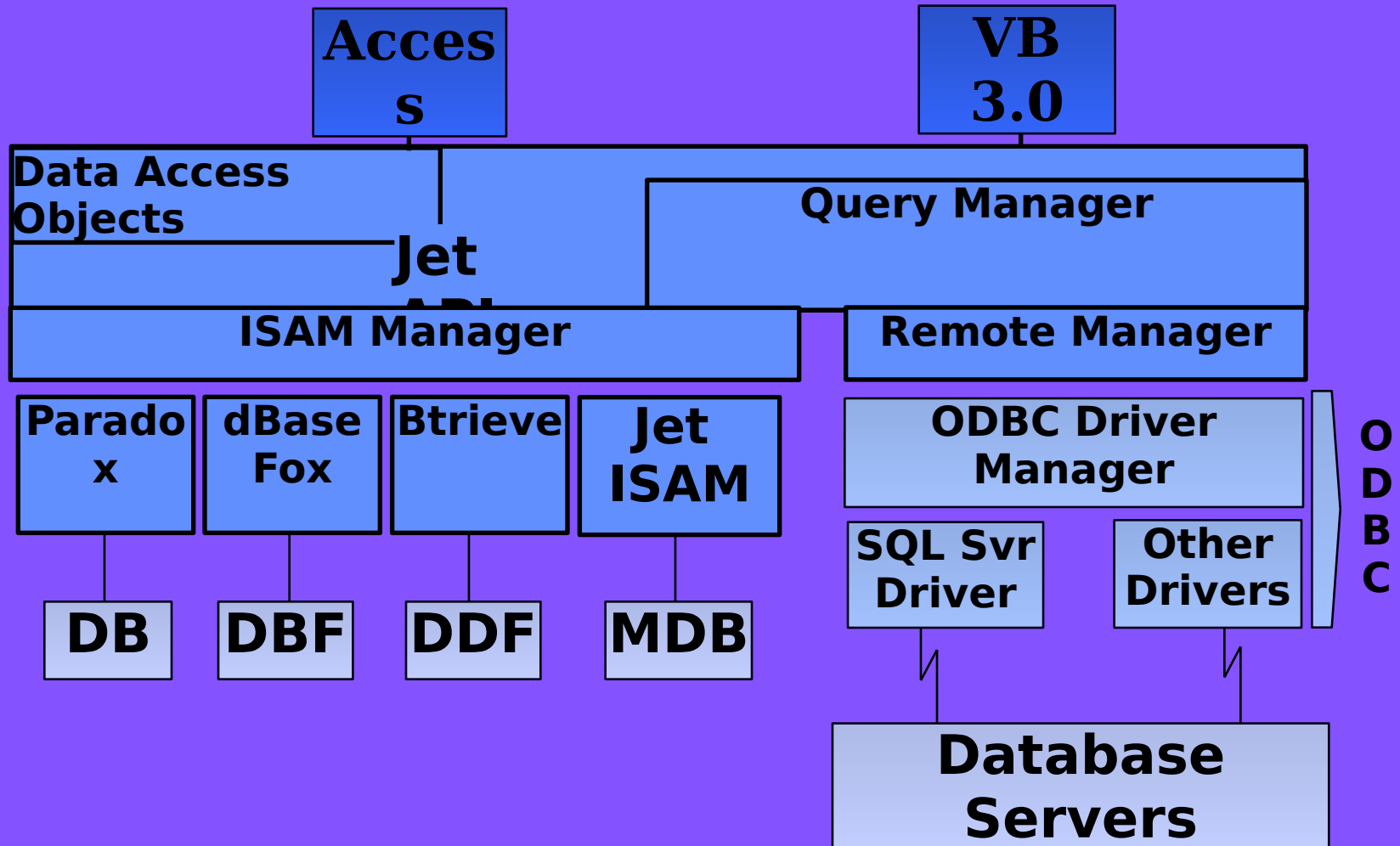
- More than a database
- Relational database engine
 - Tables/Queries
 - Referential Integrity
 - Security
 - Utilities
- Transparent & dynamic data access
- Heterogeneous query processing and execution



Accessing Jet Functionality



Jet Components



Data Access Objects

- High level, object-oriented programming model
- Jet interface for all DML and DDL
- Shared code between Access and VB

Data Access Objects

New features include

- Programmatic access to users & group security relationships
- Object oriented model

DB

DBF

DDF

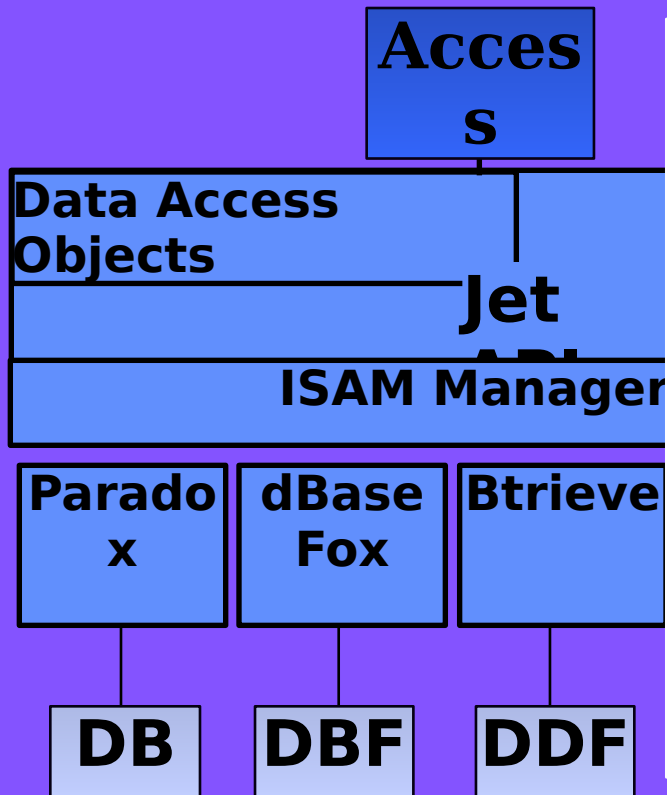
MDB

SQL Svr Driver

Other Drivers

Database Servers

Foreign ISAM Interface



- Native access to various PC database file formats
- Dispatch layer that makes all data look like the Jet ISAM

**Database
Servers**

Query Manager Functions

- Intelligent query optimization
- Heterogeneous joins
- Updateable joins
- Query on query model

**VB
3.0**

Query Manager

Remote Manager

New features include:

- **Great updateability on joined tables**
- **Optimizable distributed joins**
- **Many more operations are now sent to the server**

DB

DBF

DDF

M

Servers

Remote Manager

- SQL Databases look like the Jet ISAM
- Connection manager
- Intelligent SQL query generation
- Automated retrieval and update

**VB
3.0**

Query Manager

Remote Manager

ODBC Driver

New features include:

- **Updateable server views**
- **Support for trigger generated primary keys**
- **Less network traffic**
- **Configurable connection**

Jet ISAM

